

Atty. Docket No. 2003-0067-01
USSN 10/672,181

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A gas discharge laser having a laser gas containing fluorine comprising:
 - a gas discharge electrode comprising:
a copper and copper alloy electrode body having an upper curved region containing the discharge footprint for the electrode comprising copper and a lower portion comprising a copper alloy;
wherein the electrode has a facing portion facing a discharge region, the facing portion of the electrode being formed in an arcuate shape extending into straight line portions on either side of the arcuate portion, the straight line portions terminating in vertical straight sides, with the boundary between the copper and copper alloy including at least the arcuate portion.
2. (canceled)
3. (original): The apparatus of claim 1 further comprising:
the electrode comprising a bonded element machined from two pieces of material the first made of copper and the second made of a copper alloy bonded together before machining.
4. (currently amended): The apparatus of claim 2 further comprising:
the electrode comprising a bonded element machined from two pieces of material the first made of copper and the second made of a copper alloy bonded together before machining.
- 5.-16. (canceled)

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17. (currently amended): A method of making an electrode for a gas discharge laser having a laser gas containing fluorine comprising:

fabricating the electrode utilizing a copper and copper alloy cathode body having an upper curved region containing the discharge footprint for the electrode comprising copper and a lower portion comprising a copper alloy by diffusion bonding the upper curved region to the lower portion wherein the electrode has a facing portion facing a discharge region, the facing portion of the electrode being formed in an arcuate shape extending into straight line portions on either side of the arcuate portion, the straight line portions terminating in vertical straight sides, with the boundary between the copper and the copper alloy including at least the arcuate portion; and

forming the facing portion of the electrode in a arcuate shape extending into straight line portions on either side of the arcuate portion, the straight line portions terminating in vertical straight sides, with the boundary between the copper and the copper alloy including at least the arcuate portion.

18. (canceled)

19. (original): The method of claim 17 further comprising:

fabricating the electrode from a bonded element machined from two pieces of material the first made of copper and the second made of a copper alloy bonded together before machining.

20. (currently amended): The method of claim 18 17 further comprising:
machining the electrode from a bonded element formed of two pieces of material the first made of copper and the second made of a copper alloy bonded together before machining.

21.-32. (canceled)

33. (new): A gas discharge laser having a laser gas containing fluorine comprising:

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a gas discharge electrode comprising:
a copper and copper alloy electrode body having a conductive upper curved
region containing the discharge footprint for the electrode comprising copper and a lower
portion comprising a copper alloy.

34. (new): The apparatus of claim 33 further comprising:
the facing portion of the electrode is formed in an arcuate shape extending into
straight line portions on either side of the arcuate portion, the straight line portions
terminating in vertical straight sides, with the boundary between the copper and copper
alloy including at least the arcuate portion.

35. (new): The apparatus of claim 33 further comprising:
the electrode comprising a bonded element machined from two pieces of material
the first made of copper and the second made of a copper alloy bonded together before
machining.

36. (new): The apparatus of claim 34 further comprising:
the electrode comprising a bonded element machined from two pieces of material
the first made of copper and the second made of a copper alloy bonded together before
machining.